



METHODOLOGY FOR ASSESSING THE NET POSITIVE IMPACT ON BIODIVERSITY

Office Property Investment Division

Towards a net positive impact on biodiversity

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Introduction

On the cusp of the sixth mass extinction of wildlife and considering that 60% of vertebrates have already become extinct over the past forty years, protecting biodiversity has become an imperative, as reflected in the 2018 Biodiversity plan of the French Ministry for Ecological and Inclusive Transition. Given the significant impact of the real estate sector on biodiversity, Icade has implemented a strategy having a “net positive” impact on biodiversity that improves the environment and well-being of its inhabitants. Icade once again showed its commitment to biodiversity through its participation in the Act4nature initiative. This initiative, launched by the EpE association (French Businesses for the Environment) and AFEF-MEDEF⁽¹⁾ brings together 65 participating companies in France committed to integrating biodiversity into their growth strategies.

A number of Icade’s business activities may impact biodiversity, including land selection and acquisition, building design and construction, in addition to building operations and green space management. Potential damage could stem from light and sound pollution, fragmented habitats, soil sealing, the introduction of invasive species and soil pollution. Icade’s activities may impact ecosystem diversity, wildlife mobility, genetic mixing of species, and the emergence of new species. This could reduce the size or change the structure of populations, with an expansion of pest species, and even disrupt natural cycles in ecosystems.

Icade implements corrective actions to prevent, reduce and offset any adverse impacts on biodiversity over the building life cycle.

It is not only a question of creating green space in an urban setting for the sake of landscaping, but also of preserving biodiversity in addition to enhancing and creating new urban ecosystems. This document sets out the methodology for assessing the net positive impact on biodiversity associated with the operational phase of the buildings and green spaces owned by Icade, determined and measured as part of the biodiversity performance contract entered into between the Office Property Investment Division and CDC Biodiversité. CDC Biodiversité is a subsidiary of Caisse des dépôts entirely dedicated to promoting biodiversity and its long-term management.

A net positive impact on biodiversity is defined as positive change in a set of ecological criteria relating to plant and animal life, soil, water and green space management. Icade is committed to ensuring that 25% of its portfolio achieves a net positive impact on diversity by 2020, and 50% of the portfolio by 2022. In 2016, Icade entered into a biodiversity performance contract with CDC Biodiversité in order to meet these objectives.

1. Biodiversity performance contract

This innovative initiative, based on indicators of resources and performance, aims to give a more prominent place to nature in cities and to improve the well-being of Icade’s business park users. The contract features measurable performance indicators with respect to plant and animal life, biological diversity, lower chemical inputs and water use.

The scope of the analysis conducted in 2018 as part of the biodiversity performance contract includes the Portes de Paris business park located in the cities of Saint-Denis and Aubervilliers (Seine-Saint-Denis) and the Orly-Rungis business park located in Rungis (Val-de-Marne)⁽²⁾. It covered 97% of the total area of Icade’s business parks at the end of 2018 (vs. 33%

in 2017). These two business parks, with different ecological characteristics, are assessed separately with the results presented below for each park.

Before launching the biodiversity performance contract, an initial assessment had been conducted in 2014 in the Portes de Paris business park. The results of the 2014 assessment were used as comparative data for the analyses conducted in 2017 in 2018. The results of the first assessments conducted in the Orly-Rungis business park in 2015 will be used as comparative data. Further assessments were carried out in 2018. These two analyses will be repeated to measure the extent to which the 2020 objective has been met.

2. Definition of “net positive impact on biodiversity”

The biodiversity performance contract makes it possible to monitor, for each business park, 31 indicators, including 21 considered to be a priority by CDC Biodiversité and used to measure the “net positive impact on biodiversity”. These 21 indicators include 13 resource indicators and eight performance indicators.

Icade and CDC Biodiversité have defined “net positive impact on biodiversity” as follows:

- 100% of priority resource indicators have improved or remained stable at an optimal level;
- 50% of the performance indicators have improved.

These indicators do not have the same objective due to the fact that Icade is responsible for resource indicators while performance indicators depend partly on exogenous factors. Performance indicators were nonetheless included in the definition of “net positive impact on biodiversity”, even though Icade is not solely responsible for them, so as to include the notion of “final impact” in the definition.

As a result, Icade must meet this definition of a “net positive impact on biodiversity” for 25% of its business parks to reach its objective by 2020 and for 50% of its business parks by 2022.

3. Monitoring indicators and 2018 results

The last analysis conducted in 2018 showed the following: out of the 62 indicators analysed for the two business parks covered by the biodiversity performance contract:

- priority resource indicators:
 - 10 improved,
 - 4 remained stable at an optimal level,
 - 5 remained stable,
 - 1 declined,
 - 6 were not available;
- performance indicators:
 - 1 improved,
 - 1 remained stable at an optimal level,
 - 3 remained stable,
 - none declined,
 - 11 were not available.

In total, 54% of priority resource indicators and 13% of performance indicators improved or were stable at an optimal level. In 2019, additional measurements will be carried out for those indicators that were not measured in 2018.

(1) French Association of Private Companies (Association française des entreprises privées, AFEF); and National Confederation of French Employers (Mouvement des entreprises de France, MEDEF).

(2) As the Pont de Flandre business park, which was assessed in 2017, is no longer in the business park segment as defined in Icade’s financial statements, it was excluded from the scope of the analysis presented in this document.

3.1. Portes de Paris business park

Priority resource indicators and related results for the Portes de Paris business park are shown in the following table:

Indicators	Units	2014 (base year)	2017 result	2018 result	Change recorded ⁽¹⁾	Target progress for 2020 vs. base year ⁽²⁾
LANDSCAPE MANAGEMENT						
Green spaces						
◆ Percentage of green spaces (green spaces/total area)	%	8	N/Av.	6	⬇️	⬆️
Trees						
◆ Index of tree species diversity (number of species on the site/ number of species typical of the Paris region)	%	10	N/Av.	11	⬆️ ★	⬆️
Shrubs						
◆ Percentage of shrubs planted (sq.m of shrubs planted/total sq.m of existing shrubs)	%	0	N/Av.	0.05	⬆️ ★	⬆️
◆ Index of shrub species diversity (number of species on the site/ number of species typical of the Paris region)	%	10	N/Av.	10	➡️	⬆️
Plant and animal habitats						
◆ Number of plant and animal habitats identified	Number	8	8	8	➡️	⬆️
Habitat types						
● Number of habitat specialist ⁽⁴⁾ bird species (forest, farmland, aquatic, riverbank)/total number of bird species observed	%	N/Av.	30	N/Av.	N/Av. ⁽³⁾	⬆️
● Number of entomophilous plant species (plants pollinated by honey-producing insects such as bees)	Number	5	5	N/Av.	➡️	⬆️
● Number of butterfly host plant species	Number	N/Av.	5	N/Av.	N/Av. ⁽³⁾	⬆️
● Habitat duration (flowering period, insect presence, etc.)	Number of months	3	3	N/Av.	➡️	⬆️
● Number of new spontaneous plant species (no direct sowing or planting) identified (base year 2014)	Number	N/Av.	36	N/Av.	⬆️ ★	⬆️
Pests and invasive plant species						
● Number of pest species ⁽⁵⁾	Number	1	1	N/Av.	➡️ ★	➡️
● Number of invasive plant species	Number	11	11	N/Av.	➡️	⬇️
Soil						
● Number of worms	Number	N/Av.	N/Av.	N/Av.	N/Av. ⁽³⁾	⬆️
◆ Organic amendments for soil improvement ⁽⁶⁾	sq.m	0	0	N/Av.	➡️	⬆️
◆ Mulched areas/total area	%	0	100	100	⬆️ ★	⬆️
Weed management						
◆ Areas using chemicals to kill weeds/total area	%	0	0	0	➡️ ★	➡️
Senescent tree management						
◆ Number of standing or lying dead or senescent trees (old trees) ⁽⁷⁾	Number	N/Av.	N/Av.	0	N/Av. ⁽³⁾	⬆️
WASTE MANAGEMENT						
◆ Quantity of green waste removed and recovered	%	0	N/Av.	100	⬆️ ★	⬆️
TRAINING						
◆ Training of Icade's green space managers and its partners	Cumulative number of hours	0	120	120	⬆️ ★	⬆️
LIGHTING						
◆ Number of dimmer switches/total number of lights	%	N/Av.	0	0	➡️	⬆️
◆ Number of LED lights/total number of lights	%	N/Av.	0	0	➡️	⬆️

N/Av.: Not available N/Av.: Not applicable ◆ resource indicators ● performance indicators ★ indicators stable at an optimal level or improved

(1) Change between the earliest (2014 or 2017 as appropriate) and the most recent data (2017 or 2018 as appropriate).

(2) If there is no figure for the base year, the change is calculated compared to the earliest figure available.

(3) These indicators will be assessed in 2019.

(4) The so-called specialist species can thrive only in a narrow range of environmental conditions or have a limited diet, in contrast to generalist species. A natural environment in which there is a large number of specialist species is indicative of a wide range of habitats able to accommodate greater biological diversity.

(5) The goal is for this indicator to remain stable as the one pest species identified did not seem to disturb the habitats studied in 2018. Icade and CDC Biodiversité will monitor the growth of pest species and their impact and will take the necessary measures if new pest species appear or if their impact worsens.

(6) Organic amendments are compounds produced from green and farm waste and used to ensure better soil stabilisation and fertilisation.

(7) Standing or lying senescent or dead trees are rich in different habitats where large numbers of animal species may thrive.

3.2. Orly-Rungis business park

Priority monitoring indicators and related results for the Orly-Rungis business park are shown in the following table:

Indicators	Units	2015 results	2018 results	Change between 2015 and 2018	Target progress for 2020 vs. Base year ⁽¹⁾
LANDSCAPE MANAGEMENT					
Green spaces					
◆ Percentage of green spaces (green spaces/total area)	%	N/Av.	20	N/Av. ⁽²⁾	⬆️
Trees					
◆ Index of tree species diversity (number of species on the site/number of species typical of the Paris region)	%	N/Av.	21	N/Av. ⁽²⁾	⬆️
Shrubs					
◆ Percentage of shrubs planted (sq.m of shrubs planted/total sq.m of existing shrubs)	%	N/Av.	0.8%	⬆️ ★	⬆️
◆ Index of shrub species diversity (number of species on the site/number of species typical of the Paris region)	%	N/Av.	29	N/Av. ⁽²⁾	⬆️
Plant and animal habitats					
◆ Number of plant and animal habitats identified	Number	N/Av.	11	N/Av. ⁽²⁾	⬆️
Habitat types					
● Number of habitat specialist ⁽³⁾ bird species (forest, farmland, aquatic, riverbank)/total number of bird species observed	%	N/Av.	52.2%	N/Av. ⁽²⁾	⬆️
● Number of entomophilous plant species (plants pollinated by honey-producing insects such as bees)	Number	N/Av.	219	N/Av. ⁽²⁾	⬆️
● Number of butterfly host plant species	Number	N/Av.	37	N/Av. ⁽²⁾	⬆️
● Habitat duration (flowering period, insect presence, etc.)	Number of months	N/Av.	7	N/Av. ⁽²⁾	⬆️
● Number of new spontaneous plant species (no direct sowing or planting) identified (base year 2014)	Number	N/Av.	N/Av.	N/Av. ⁽²⁾	⬆️
Pests and invasive plant species					
● Number of pest species	Number	N/Av.	2	N/Av. ⁽²⁾	⬇️
● Number of invasive plant species	Number	N/Av.	10	N/Av. ⁽²⁾	⬇️
Soil					
● Number of worms	Number	N/Av.	N/Av.	N/Av. ⁽²⁾	⬆️
◆ Organic amendments for soil improvement ⁽⁴⁾	sq.m	0	800	⬆️ ★	⬆️
◆ Mulched areas/total area	%	100	100	⬆️ ★	⬆️
Weed management					
◆ Areas using chemicals to kill weeds/total area	%	0	0	⬆️ ★	⬆️
Senescent tree management					
◆ Number of standing or lying dead or senescent trees (old trees) ⁽⁵⁾	Number	0	1	⬆️ ★	⬆️
WASTE MANAGEMENT					
◆ Quantity of green waste removed and recovered	%	100	100	⬆️ ★	⬆️
TRAINING					
◆ Training of Icade's green space managers and its partners	Cumulative number of hours	N/Av.	0	N/Av. ⁽²⁾	⬆️
LIGHTING					
◆ Number of dimmer switches/total number of lights	%	0	100	⬆️ ★	⬆️
◆ Number of LED lights/total number of lights	%	0	100	⬆️ ★	⬆️

N/Av.: Not available N/Av.: Not applicable ◆ resource indicators ● performance indicators ★ indicators stable at an optimal level or improved

(1) If there is no figure for the base year (2015), the change is calculated compared to the earliest figure available.

(2) These indicators will be assessed in 2019.

(3) The so-called specialist species can thrive only in a narrow range of environmental conditions or have a limited diet, in contrast to generalist species. A natural environment in which there is a large number of specialist species is indicative of a wide range of habitats able to accommodate greater biological diversity.

(4) Organic amendments are compounds produced from green and farm waste and used to ensure better soil stabilisation and fertilisation.

(5) Standing or lying senescent or dead trees are rich in different habitats where large numbers of animal species may thrive.

In addition, Icade and CDC Biodiversité measured ten other indicators which are not included in the definition of “net positive impact on biodiversity” as they are considered secondary. These secondary indicators enhance the analysis of the primary indicators and provide a broader overview of Icade’s impact on biodiversity. They include methods

for maintaining grassland (frequent cutting, infrequent or high cutting, grazing), the quantity of green waste removed, the number of hives, insect hotels and other wildlife habitats built, the percentage of automated watering systems and awareness-raising campaigns in addition to internal and external communication on biodiversity issues.

4. Improvements observed in 2018, and 2019 action plan

Based on the latest study conducted in 2018, more than half of the priority resource indicators showed positive change, including tree species diversity and organic amendments for soil improvement. The trend is less clear-cut for performance indicators, with additional measurements expected in 2019.

Efforts will be stepped up to achieve a “net positive impact on biodiversity” in at least 25% of Icade’s business parks by 2020 by

introducing plants into built environments to reduce urban heat islands; using grassed surfaces as meadows to promote more sustainable management measures (infrequent, high cutting); recycling grass clippings; adding habitats and environments to increase the number of species; increasing the number of insect hotels; reducing invasive plant species; identifying areas where watering should be reduced; collecting rainwater, etc.

5. Outlook: Moving towards a common indicator to monitor positive biodiversity impacts

With the Business for Positive Diversity (B4B+) Club led by CDC Biodiversité, Icade has been involved in creating a standardised indicator to quantify a company’s impact on biodiversity, in collaboration with companies, associations and researchers. This indicator, called the global biodiversity score (GBS) scheduled for 2020, seeks to measure the biodiversity footprint of companies regardless of their sector of

activity. These efforts are consistent with the French government’s 2018-2024 Biodiversity plan which incites companies to quantify their biodiversity footprint.

This new indicator will improve the measurement method implemented in connection with the biodiversity performance contract.